## (19) World Intellectual Property Organization

International Bureau



# 4 (1888) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884) 1 (1884)

(43) International Publication Date 18 November 2004 (18.11.2004)

**PCT** 

### (10) International Publication Number WO 2004/100003 A3

(51) International Patent Classification7:

H04N 5/445

(21) International Application Number:

PCT/US2004/013861

(22) International Filing Date:

4 May 2004 (04.05.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/467.932

5 May 2003 (05.05.2003)

- (71) Applicant (for all designated States except US): THOM-SON LICENSING S.A. [FR/FR]; 46, Quai A. Le Gallo, F-92100 Boulogne-Billancourt (FR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): MEARS, Mark, Gilmore [US/US]; 6514 Hyde Park Drive, Zionsville, Indiana 46077-8258 (US). LEFEVRE, Chad, Andrew [US/US]; 8707 Arbor Lake Drive, #1526, Indianapolis, Indiana 47268 (US). DINWIDDIE, Aaron, Hal [US/US]; 1075 Bear Cub Drive, Cicero, Indiana 46034 (US). CARLSGAARD, Eric, Stephen [US/US]; 6775 Woodcliff Circle, Zionsville, Indiana 46077 (US). FOR-LER. Joseph. Wayne [US/US]; 1112 Foxglove Court, Zionsville, Indiana 46077 (US).

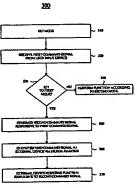
- (74) Agents: TRIPOLI, Joseph, S. et al.; Two Independence Way, Suite #200, Princeton, New Jersey 08540 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR CONTROLLING AN EXTERNAL DEVICE BY REMAPPING KEYS ON A USER INPUT DEVICE



(57) Abstract: An apparatus (20) such as a television signal receiver controls an external device (40) such as a digital recording/reproduction device via a digital data bus (30) by remapping keys on a user input device (10). According to an exemplary embodiment, the apparatus includes an input/output terminal (13) operative to enable signal transfer between the television signal receiver (20) and an external device (40) via a digital data bus (30). A processor (14) is operative to detect a first command signal of a first and an external force of the television signal receiver (20). control protocol from a user input device (10), and to detect one of first and second modes of the television signal receiver (20). The processor (14) detects the first mode in response to making a connection between the television signal receiver (20) and the external device (40) via the digital data bus (30), and detects the second mode in response to terminating the connection between the television signal receiver (20) and the external device (40) via the digital data bus (30). The processor (14) enables the input/output terminal (13) to output a second command signal of a second control protocol to the external device (40) via the digital data bus (30) responsive to the first command signal if the first mode is detected. The processor (14) enables a function of the television signal receiver (20) responsive to the first command signal without enabling output of the second command signal to the external device (40) if the second mode is detected.





## WO 2004/100003 A3



- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 3 November 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

### INTERNATIONAL SEARCH REPORT

International Application No PC1/US2004/013861

A. CLASSII IPC 7	FICATION OF SUBJECT MATTER H04N5/445			
According to	o International Patent Classification (IPC) or to both national classifi	ication and IPC		
	SEARCHED		•	
	ocumentation searched (classification system followed by classification H04L H04N G06F	ation symbols)		
	dion searched other than minimum documentation to the extent that			
Electronic d	data base consulted during the international search (name of data t	base and, where practical, search terms used	) =-	
EPO-In	ternal			
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT			
Category °	Citation of document, with indication, where appropriate, of the r	Relevant to daim No.		
X	US 4 817 203 A (TSURUMOTO ET AL) 28 March 1989 (1989-03-28) the whole document	)	1–24	
A	EP 1 113 442 A (LG ELECTRONICS 1 4 July 2001 (2001-07-04) the whole document	INC)	1-24	
А	US 5 598 523 A (FUJITA ET AL) 28 January 1997 (1997-01-28) column 3, line 20 - line 39 column 5, line 9 - line 67		1-24	
		Describe the market are listed		
Fun	rither documents are listed in the continuation of box C.	Patent family members are listed	in annex.	
*A* docum	eategories of cited documents: nent defining the general state of the art which is not	"T" later document published after the into or priority date and not in conflict with cited to understand the principle or the	the application but	
considered to be of particular relevance  "E" earlier document but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filing date but later than the priority date claimed		invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  "&" document member of the same patent family		
	e actual completion of the international search  18 August 2005	Date of mailing of the international sea	arch report	
	it mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer		
	NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (-31-70) 340-3016	Van de Maele, L		

### INTERNATIONAL SEARCH REPORT

	tional Application No
PCT	US2004/013861

Patent document clted in search report		Publication date	İ	Patent family member(s)	Publication date
US 4817203	A	28-03-1989	JP	2067157 C	10-07-1996
	•		JP	7105895 B	13-11-1995
			JP	62284583 A	10-12-1987
			CA	1256945 A1	04-07-1989
			GB	2191643 A	,B 16-12-1987
			HK	69794 A	29-07-1994
			KR	9604507 B1	06-04-1996
EP 1113442	A	04-07-2001	KR	2001060616 A	07-07-2001
L. 1110	••	•••		1304252 A	18-07-2001
			CN EP	1113442 A2	04-07-2001
			ĴΡ	2001238278 A	31-08-2001
			JP	2004007639 A	08-01-2004
			US	2001020958 A1	13-09-2001
US 5598523	Α	28-01-1997	NONE		طالب الله الله عن من الكسنية في هذه من الله الله